◈BLACK BOX®

| UCCDS20T | UCCDS40H | UCCDM36T | UCCDL27H | UCCDM-10-40T |
| UCCDS20H | UCCDM18T | UCCDM36H | UCCDL36T | UCCDM-10-40H |
| UCCDS30T | UCCDM18H | UCCDL18T | UCCDL36H | UCCDM-12-48T |
| UCCDS30H | UCCDM27T | UCCDL18H | UCCDM-10-30T | UCCDM-12-48H |
| UCCDS40T | UCCDM27H | UCCDL27T | UCCDM-10-30H | UCCDS-12-48T |
| | | | | UCCDS-12-48H |

## iPad®, Chromebook®, Tablet, and Laptop Cart, Double Frame

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INDUSTRY CANADA RADIO FREQUENCY INTERFERENCE STATEMENTS

This equipment generates, uses, and can radiate radio-frequency energy, and if not installed and used properly, that is, in strict accordance with the manufacturer's instructions, may cause interference to radio communication. It has been tested and found to comply with the limits for a Class A computing device in accordance with the specifications in Subpart B of Part 15 of FCC rules, which are designed to provide reasonable protection against such interference when the equipment is operated in a commercial environment. Operation of this equipment in a residential area is likely to cause interference, in which case the user at his own expense will be required to take whatever measures may be necessary to correct the interference.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This digital apparatus does not exceed the Class A limits for radio noise emission from digital apparatus set out in the Radio Interference Regulation of Industry Canada.

Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de la classe A prescrites dans le Règlement sur le brouillage radioélectrique publié par Industrie Canada.

Normas Oficiales Mexicanas (NOM)
Electrical Safety Statement
INSTRUCCIONES DE SEGURIDAD

1. Todas las instrucciones de seguridad y operación deberán ser leídas antes de que el aparato eléctrico sea operado.

2. Las instrucciones de seguridad y operación deberán ser guardadas para referencia futura.

3. Todas las advertencias en el aparato eléctrico y en sus instrucciones de operación deben ser respetadas.

4.  Todas las instrucciones de operación y uso deben ser seguidas.

5.  El aparato eléctrico no deberá ser usado cerca del agua—por ejemplo, cerca de la tina de baño, lavabo, sótano mojado o cerca de una alberca, etc.

6.  El aparato eléctrico debe ser usado únicamente con carritos o pedestales que sean recomendados por el fabricante.

7.  El aparato eléctrico debe ser montado a la pared o al techo sólo como sea recomendado por el fabricante.

8.  Servicio—El usuario no debe intentar dar servicio al equipo eléctrico más allá lo descrito en las instrucciones de operación. Todo otro servicio deberá ser referido a personal de servicio calificado.

9.  El aparato eléctrico debe ser situado de tal manera que su posición no interfiera su uso. La colocación del aparato eléctrico sobre una cama, sofá, alfombra o superficie similar puede bloquea la ventilación, no se debe colocar en libreros o gabinetes que impidan el flujo de aire por los orificios de ventilación.

10. El equipo eléctrico deber ser situado fuera del alcance de fuentes de calor como radiadores, registros de calor, estufas u otros aparatos (incluyendo amplificadores) que producen calor.

11. El aparato eléctrico deberá ser connectado a una fuente de poder sólo del tipo descrito en el instructivo de operación, o como se indique en el aparato.

12. Precaución debe ser tomada de tal manera que la tierra fisica y la polarización del equipo no sea eliminada.

13. Los cables de la fuente de poder deben ser guiados de tal manera que no sean pisados ni pellizcados por objetos colocados sobre o contra ellos, poniendo particular atención a los contactos y receptáculos donde salen del aparato.

14. El equipo eléctrico debe ser limpiado únicamente de acuerdo a las recomendaciones del fabricante.

15. En caso de existir, una antena externa deberá ser localizada lejos de las lineas de energia.

16. El cable de corriente deberá ser desconectado del cuando el equipo no sea usado por un largo periodo de tiempo.

17. Cuidado debe ser tomado de tal manera que objectos liquidos no sean derramados sobre la cubierta u orificios de ventilación.

18. Servicio por personal calificado deberá ser provisto cuando:

 A: El cable de poder o el contacto ha sido dañado; u

 B: Objectos han caído o líquido ha sido derramado dentro del aparato; o

 C: El aparato ha sido expuesto a la lluvia; o

 D: El aparato parece no operar normalmente o muestra un cambio en su desempeño; o

 E: El aparato ha sido tirado o su cubierta ha sido dañada.

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# Table of Contents

Table of Contents

## 1. Specifications

Table 1-1. Cart Specifications

| Part Number | UCCDS20T, UCCDS20H | UCCDS30T, UCCDS30H | UCCDS40T, UCCDS40H |
|---|---|---|---|
| Slot Dimensions | | | |
| Height (in.) | 13" | 13" | 13" |
| Height (cm) | 33.02 cm | 33.02 cm | 33.02 cm |
| Width (in.) | 1.36" | 1.3.6" | 1.36" |
| Width (cm) | 3.45 cm | 3.45 cm | 3.45 cm |
| Depth (in.) | 10" | 10" | 10" |
| Depth (cm) | 25.4 | 25.4 cm | 25.4 cm |
| Device Capacity | | | |
| Number of Devices | 20 | 30 | 40 |
| External Dimensions (Including Handle)* | | | |
| Height (in.) | 44.27" | 44.27" | 44.27" |
| Height (cm) | 112.4 cm | 112.4 cm | 112.4 cm |
| Width (in.) | 54.41" | 54.41" | 54.41" |
| Width (cm) | 138.2 cm | 138.2 cm | 138.2 cm |
| Depth (in.) | 25.35" | 25.25" | 25.35" |
| Depth (cm) | 64.38 cm | 64.38 cm | 64.38 cm |
| Weight (Cart with Sliding Door) | | | |
| | UCCDS20T | UCCDS30T | UCCDS40T |
| Weight (lb.) | 164 lb. | 176 lb. | 188 lb. |
| Weight (kg) | 74.4 kg | 79.8 kg | 85.3 kg |
| Weight (Cart with Solid Steel Door) | | | |
| | UCCDS20H | UCCDS30H | UCCDS40H |
| Weight (lb.) | 179 lb. | 191 lb. | 203 lb. |
| Weight (kg) | 81.2 kg | 86.6 kg | 92.1 kg |

*External dimensions are the same for all double cart models.*

*NOTE: Weight capacity for all double carts is 150 lb. (68.2 kg), stationary.*

Table 1-1 (continued). Cart Specifications

| Part Number | UCCDM18T, UCCDM18H | UCCDM27T, UCCDM27H | UCCDM36T, UCCDM36H |
|---|---|---|---|
| Slot Dimensions | | | |
| Height (in.) | 13" | 13" | 13" |
| Height (cm) | 33.02 cm | 33.02 cm | 33.02 cm |
| Width (in.) | 1.53" | 1.53" | 1.53" |
| Width (cm) | 3.89 cm | 3.89 cm | 3.89 cm |
| Depth (in.) | 15" | 15" | 15" |
| Depth (cm) | 38.1 cm | 38.1 cm | 38.1 cm |
| Device Capacity | | | |
| Number of Devices | 18 | 27 | 36 |
| External Dimensions (Including Handle)* | | | |
| Height (in.) | 44.27" | 44.27" | 44.27" |
| Height (cm) | 112.4 cm | 112.4 cm | 112.4 cm |
| Width (in.) | 54.41" | 54.41" | 54.41" |
| Width (cm) | 138.2 cm | 138.2 cm | 138.2 cm |
| Depth (in.) | 25.35" | 25.35" | 25.35" |
| Depth (cm) | 64.38 cm | 64.38 cm | 64.38 cm |
| Weight (Cart with Sliding Door) | | | |
| | UCCDM18T | UCCDM27T | UCCDM36T |
| Weight (lb.) | 170 lb. | 185 lb. | 200 lb. |
| Weight (kg) | 77.1 kg | 83.9 kg | 90.7 kg |
| Weight (Cart with Solid Steel Door) | | | |
| | UCCDM18H | UCCDM27H | UCCDM36H |
| Weight (lb.) | 185 lb. | 200 lb. | 215 lb. |
| Weight (kg) | 83.9 kg | 90.7 kg | 97.5 kg |

*External dimensions are the same for all double cart models.

NOTE: Weight capacity for all double carts is 150 lb. (68.2 kg), stationary.

Table 1-1 (continued). Cart Specifications

| Part Number | UCCDL18T, UCCDL18H | UCCDL27T, UCCDL27H | UCCDL36T, UCCDL36H |
|---|---|---|---|
| Slot Dimensions | | | |
| Height (in.) | 13" | 13" | 13" |
| Height (cm) | 33.02 cm | 33.02 cm | 33.02 cm |
| Width (in.) | 1.53" | 1.53" | 1.53" |
| Width (cm) | 3.89 cm | 3.89 cm | 3.89 cm |
| Depth (in.) | 17" | 17" | 17" |
| Depth (cm) | 43.18 cm | 43.18 cm | 43.18 cm |
| Device Capacity | | | |
| Number of Devices | 18 | 27 | 36 |
| External Dimensions (Including Handle)* | | | |
| Height (in.) | 44.27" | 44.27" | 44.27" |
| Height (cm) | 112.4 cm | 112.4 cm | 112.4 cm |
| Width (in.) | 54.41" | 54.41" | 54.41" |
| Width (cm) | 138.2 cm | 138.2 cm | 138.2 cm |
| Depth (in.) | 25.35" | 25.35" | 25.35" |
| Depth (cm) | 64.38 cm | 64.38 cm | 64.38 cm |
| Weight (Cart with Sliding Door) | | | |
| | UCCDL18T | UCCDM27T | UCCDL36T |
| Weight (lb.) | 176 lb. | 194 lb. | 212 lb. |
| Weight (kg) | 79.8 kg | 88 | 96.2 kg |
| Weight (Cart with Solid Steel Door) | | | |
| | UCCDL18H | UCCDM27H | UCCDL36H |
| Weight (lb.) | 191 lb. | 209 lb. | 227 lb. |
| Weight (kg) | 86.6 kg | 94.8 kg | 103 kg |

*External dimensions are the same for all double cart models.

NOTE: Weight capacity for all double carts is 150 lb. (68.2 kg), stationary.

.

Table 1-1 (continued). Cart Specifications

| Part Number | UCCDM-10-30H, UCCDM-10-30T | UCCDM-10-40H, UCCDM-10-40T |
|---|---|---|
| Slot Dimensions | | |
| Height (in.) | 13" | 13" |
| Height (cm) | 33.02 cm | 33.02 cm |
| Width (in.) | 1.36" | 1.36" |
| Width (cm) | 3.45 cm | 3.45 cm |
| Depth (in.) | 13" | 13" |
| Depth (cm) | 33.02 cm | 33.02 cm |
| Device Capacity | | |
| Number of Devices | 30 | 40 |
| External Dimensions (Including Handle)* | | |
| Height (in.) | 44.27" | 44.27" |
| Height (cm) | 112.4 cm | 112.4 cm |
| Width (in.) | 54.41" | 54.41" |
| Width (cm) | 138.2 cm | 138.2 cm |
| Depth (in.) | 25.35" | 25.35" |
| Depth (cm) | 64.38 cm | 64.38 cm |
| Weight (Cart with Sliding Door) | | |
| | UCCDM-10-30T | UCCDM-10-40T |
| Weight (lb.) | 273 lb. | 305.6 lb. |
| Weight (kg) | 123.8 kg | 138.6 kg |
| Weight (Cart with Solid Steel Door) | | |
| | UCCDM-10-30H | UCCDM-10-40H |
| Weight (lb.) | 273 lb. | 305.6 lb. |
| Weight (kg) | 123.8 kg | 138.6 kg |

*External dimensions are the same for all double cart models.

NOTE: Weight capacity for all double carts is 150 lb. (68.2 kg), stationary.

Table 1-1 (continued). Cart Specifications

| Part Number | UCCDM-12-48T, UCCDM-12-48H | UCCDS-12-48T, UCCDS-12-48H |
|---|---|---|
| Slot Dimensions | | |
| Height (in.) | 13" | 13" |
| Height (cm) | 33.02 cm | 33.02 cm |
| Width (in.) | 1.12" | 1.12" |
| Width (cm) | 2.84 cm | 2.84 cm |
| Depth (in.) | 15" | 10" |
| Depth (cm) | 38.1 cm | 25.4 cm |
| Device Capacity | | |
| Number of Devices | 48 | 48 |
| External Dimensions (Including Handle)* | | |
| Height (in.) | 44.27" | 44.27" |
| Height (cm) | 112.4 cm | 112.4 cm |
| Width (in.) | 54.41" | 54.41" |
| Width (cm) | 138.2 cm | 138.2 cm |
| Depth (in.) | 25.35" | 25.35" |
| Depth (cm) | 64.38 cm | 64.38 cm |
| Weight (Cart with Sliding Door) | | |
| | UCCDM-12-48T | UCCDS-12-48T |
| Weight (lb.) | 309.6 lb. | 295.6 lb. |
| Weight (kg) | 140.4 kg | 134.1 kg |
| Weight (Cart with Solid Steel Door) | | |
| | UCCDM-12-48H | UCCDS-12-48H |
| Weight (lb.) | 309.6 lb. | 295.6 lb. |
| Weight (kg) | 140.4 kg | 134.1 kg |

*External dimensions are the same for all double cart models.

NOTE: Weight capacity for all double carts is 150 lb. (68.2 kg), stationary.

Table 1-2. Power Strip Specifications

| Part Number | Timer | Included Power Strips |
|---|---|---|
| UCCDS20T, UCCDS20H | (1) 4-outlet, 4-bank timer with "always-on outlet," 15-minute increments, 100–125 V, 50–60 Hz, 15 amp max. | (2) 12-outlet, 15 A max. |
| UCCDS30T, UCCDS30H, UCCDM-10-30T, UCCDM-10-30H | | (3) 12-outlet, 15 A max. |
| UCCDS40T, UCCDS40H, UCCDM-10-40T, UCCDM-10-40H | | (4) 12-outlet, 15 A max. |
| UCCDM18T, UCCDM18H | | (2) 12-outlet, 15 A max. |
| UCCDM27T, UCCDM27H | | (3) 12-outlet, 15 A max. |
| UCCDM36T, UCCDM36H | | (3) 12-outlet, 15 A max. |
| UCCDL18T, UCCDL18H | | (2) 12-outlet, 15 A max. |
| UCCDL27T, UCCDL27H | | (3) 12-outlet, 15 A max. |
| UCCDL36T, UCCDL36H | | (3) 12-outlet, 15 A max. |
| UCCDM-12-48T, UCCDM-12-48H, UCCDS-12-48T, UCCDS-12-48H | | (4) 12-outlet, 15 A max. |

Table 1-3. Accessories Specifications

| Part Number | Accessory | Specs |
|---|---|---|
| **UCCSHELFS** | Small device shelf | Number of Slots: 10;<br>Slot Dimensions: 1.32"W x 10"D |
| **UCCSHELFM** | Medium device shelf | Number of Slots: 9;<br>Slot Dimensions: 1.52"W x 15"D |
| **UCCSHELFL** | Large device shelf | Number of Slots: 9;<br>Slot Dimensions: 1.52"W x 17"D |
| **UCCSHELF** | Storage shelf | Height: 2U |
| **UCC-PPM** | Pop-up power module | Recesses into top laminate of cart,<br>2-outlet, 110–125 V |
| **UCCDRAWER-2U** | 2U Accessory Drawer | Height: 3.5"H (2U);<br>Cable Access: 1.75"D;<br>Weight: 15 lb. (6.8 kg) |
| **UCCDRAWER-3U** | 3U Accessory Drawer | Height: 5.25"H (3U);<br>Cable Access: 1.75"D;<br>Weight: 18 lb. (8.2 kg) |

2. Overview

2.1 Introduction

The iPad®, Chromebook®, Tablet, and Laptop Cart is designed to store, charge, and transport tablets, e-readers, laptops, netbooks, and other similar devices. Units are available with capacities for 18, 20,  27, 30, 36, or 40 separate storage slots. Each unit plugs into a typical 120-volt 15-amp outlet. Carts are available with Sliding or solid-steel doors.

Please read these operating instructions carefully. They contain important advice concerning the use and safety of your cart. This iPad, Chromebook, Tablet, and Laptop Cart must only be used for its intended purpose in accordance with these operating instructions.

2.2 What's Included

• iPad, Chromebook, Tablet, and Laptop Cart with 18-, 20-, 27-, 30-, 36-, or 40-device capacity; assembled

• (4) casters (installed), including: (2) locking swivel casters and (2) non-locking fixed casters

• (1) 4-outlet timer (4-bank) (installed)

• Power Strips (installed): See the power strips specifications in Table 1-2 on the previous page.

• Cart handle with mounting hardware (to be installed by user)

• (1) user's manual

• (2) sets of keys

## 2.3 Hardware Description
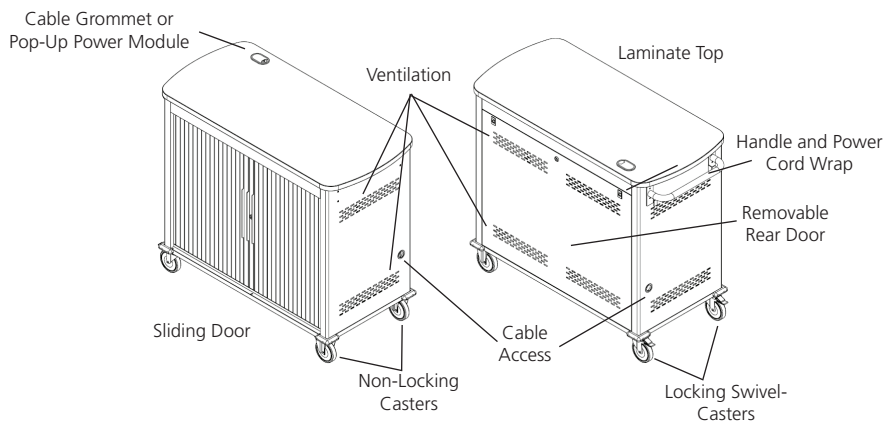


Figure 2-1. Front and back of cart with Sliding door.
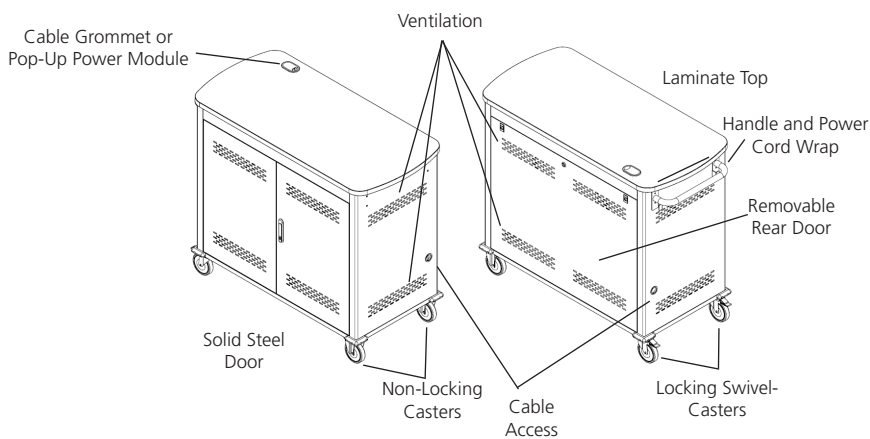


Figure 2-2. Front and back of cart with solid steel door.

## 3. Electrical Precautions

• The power switch must be in the "OFF" position before plugging the iPad, Chromebook, Tablet, and Laptop Cart into a wall receptacle.

• The Cart must ONLY be connected to a 120-volt AC 15- or 20-amp power supply.

• The Cart must only be used by adults or with adult supervision.

• Always store the power cord around the cord wraps when transporting the Cart.

• Never pull the Cart by the power cord.

• Do not plug the Cart in if the switch, receptacle(s), or power cord has been damaged. All electrical components on this product must be repaired by a qualified electrician.

• Do not use an extension cord in conjunction with the Cart.

• Do not use liquids in or around the Cart environment.

• Inadequate repair can create significant hazards to users and is not covered by warranty.

• For your safety, we recommend that a qualified electrician test the circuit you will be plugging the Cart into. The circuit should be checked for ground integrity and appropriate branch circuit protection.

• The Cart ground prong must be present for safe operation. If the plug is damaged or if the ground prong has been removed, it should be replaced by a qualified electrician.

• The use of the Cart, including plugging or unplugging laptops, plugging or unplugging the Cart, operating the control switch, and engaging or releasing the directional and locked casters, must be done with adult supervision.

## 3.1 Other Precautions

• The Cart can be very heavy when fully loaded with laptops and should be moved about by persons physically able to do so.

• The Cart should only be used for the storage and transport of tablets, laptops, and other similar devices.

• Misuse, incorrect operation, or inadequate repair of the Cart will void the warranty.

## 4. Configuration and Setup

Remove and discard all packaging materials and then lock the lockable casters.

Open and inspect the Cart to verify all doors, locks, and casters are working properly.

Do not plug the Cart into a wall outlet until all configurations and setup are complete.

### 4.1 Installing the Handle

The handle/cord wrap installs on the side of the cart with the locking swivel casters.

*NOTE: The casters swivel on one side of the Cart and are fixed on the other. Consider maneuverability options before installing the handle.*

Step 1: Locate the side of the cart with the locking swivel casters.

Step 2. Place the handle so that the holes in the brackets are aligned with the threaded holes in the side panels.
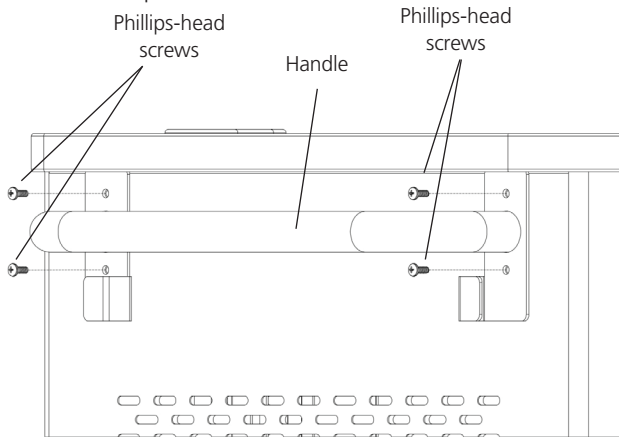


Figure 4-1. Handle assembly.

Step 3. Using a Phillips-head screwdriver, tighten four of the Phillips-head screws into the threaded holes.

4.2 Routing the Cable (UCCDS20T, UCCDS20H, UCCDS30T, UCCDS30H, UCCDS40T, UCCDS40H)

1. At the back of the cart, loosen the two screws on the cable manager, pull up on the top section of the cable manager, and place the device side of the charging cable into one of the slots. (See Figure 4-2.)
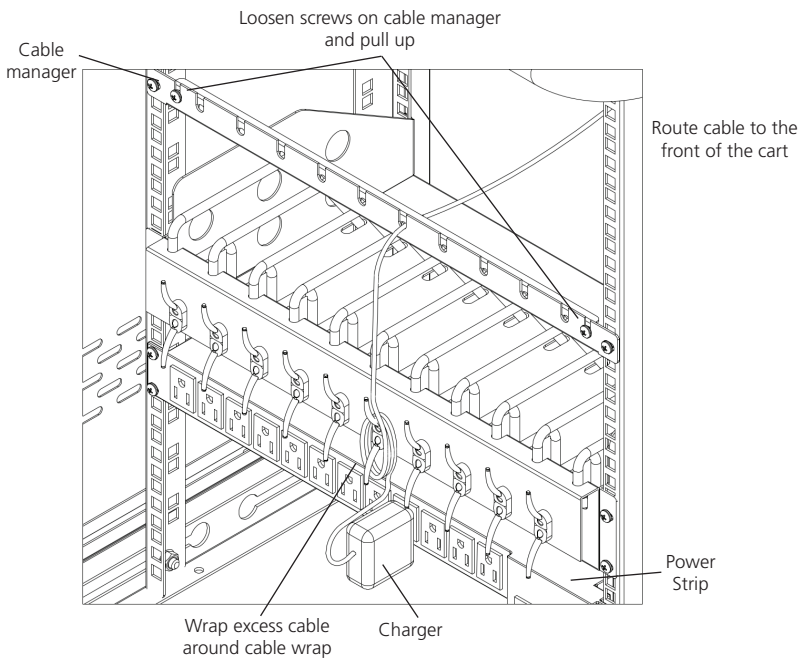


Figure 4-2. Small shelf routing instructions.

2. Replace the top section of the cable manager and tighten the screws.

3. Route the device side of the charging cable to the front of the cart and repeat step 1 for the front cable manager.

4. Wrap any excess cable around the cable wrap on the back of the shelf.

5. Plug the charger power plug into the power strip located below the shelf.
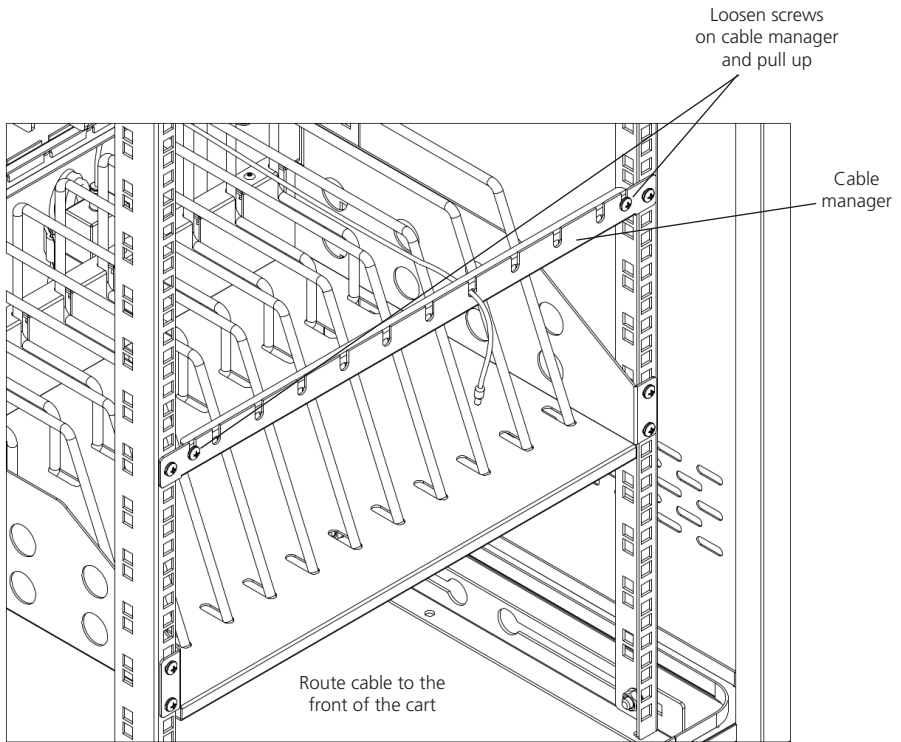
Figure 4-3. Routing the cable.

4.3 Fastening the Power Bricks and Routing the Cable (UCCDM18T, UCCDM18H, UCCDM27T, UCCDM27H, UCCDM36T, UCCDM36H, UCCDL18T, UCCDL18H, UCCDL27T, UCCDL27H, UCCDL36T, UCCDL36H)

1. Attach the wrapped cord and power brick to the back of the shelf using the hook and loop strap. Keep some extra cable unwrapped to plug into the power strip. (See Figure 4-4.)

2. Loosen the two screws on the cable manager, pull up on the top section of the cable manager, and place the device side of the charging cable into one of the slots.

3. Replace the top section of the cable manager and tighten the screws.

4. Route the device side of the charging cable to the front of the cart and repeat step 2 for the front cable manager (see Figure 4-3).

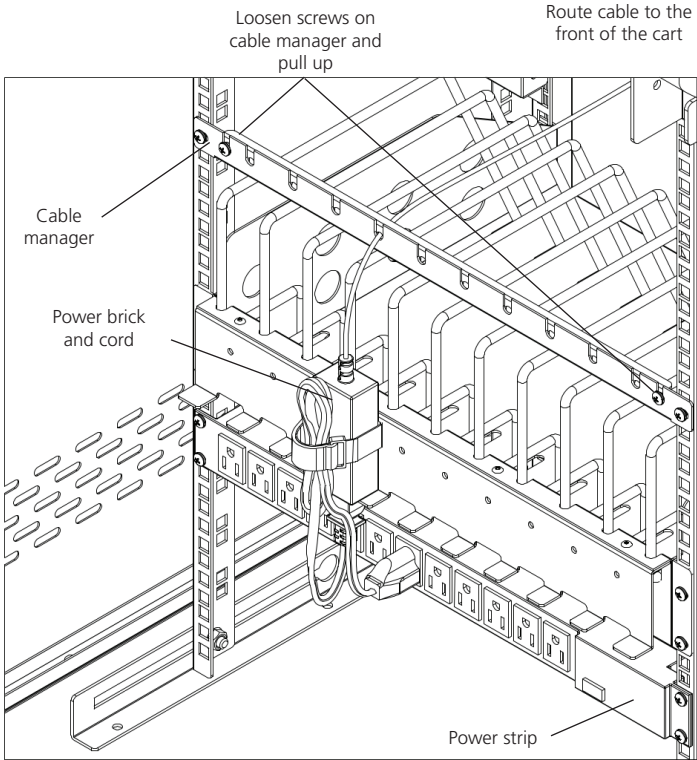5. Plug the charger power plug into the power strip located below the shelf.

Loosen screws on
cable manager and
pull up

Route cable to the
front of the cart

Cable
manager

Power brick
and cord

Power strip

Figure 4-4. Fastening the power brick and routing the cable..

## 5. Using Your iPad, Chromebook, Tablet, and Laptop Cart

### 5.1 Charging Your Computers

• After the devices have been loaded into the Cart, plug the power cord of the Cart into a suitable receptacle.

• Locate the internal power switches on the timer and power strips of the Cart and push the switches to the ON position.

### 5.2 Moving Your iPad, Chromebook, Tablet, and Laptop Cart

• Turn the timer power switch to the off position.

• Remove the Cart plug from the wall receptacle and wrap the cord around the cord wrap or handle.

• Close and secure Sliding or solid-steel doors.

• Your Cart comes equipped with two fixed casters and two locking swivel casters. Unlock the casters before moving the Cart to a new location.

• When you reach your desired destination, lock the casters to prevent the cart from moving and plug the Cart into a wall receptacle.
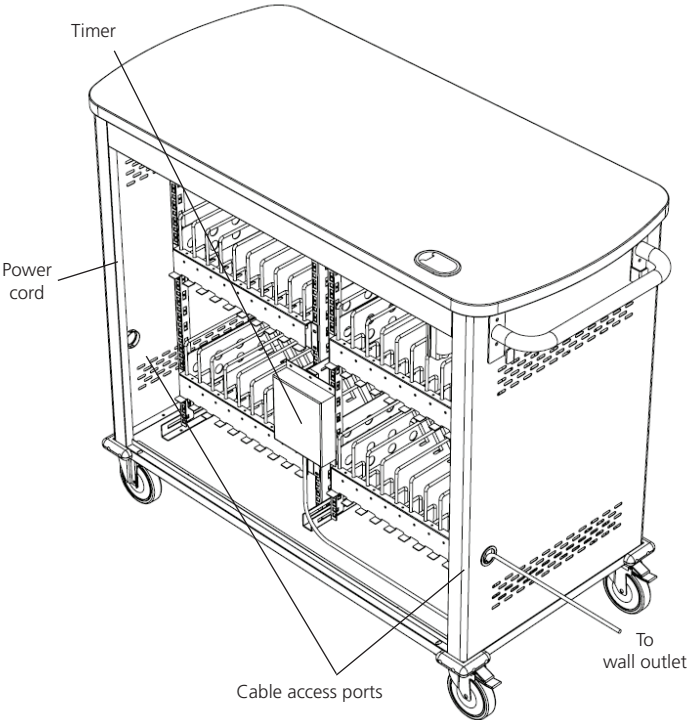
Timer

Power
cord

Cable access ports

To
wall outlet

Figure 5-1. Plug the cart into the wall.

## 5.3 Timer Instructions

Before using your timer:

• For your safety, we recommend that a qualified electrician test the circuit you will plug the cart into. The circuit should be checked for ground integrity and appropriate branch circuit protection.

• The cart's ground prong must be present for safe operation. If the plug is damaged or if the ground prong has been removed, it should be replaced by a qualified electrician.

• Using the cart, including plugging it in or unplugging it, plugging in or unplugging the laptop(s) or other electrical equipment, or operating the control switch must be done with adult supervision.

The timer comes preset from the factory to alternate power between the power strips at 15-minute intervals.

All power strips cannot charge simultaneously.

By plugging the cart power cord into an approved outlet and flipping the red switches located on the timer and power strips, the cart will begin charging.

To end power, turn the red switch on the timer off and unplug the cart from the wall outlet.

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UCCDM20T, version 2

# Resources

## Appendix: Resources

Do you have technical questions about this product or similar technology? Check out the Resources listed below or contact our FREE Technical Support at 724-746-5500 or info@blackbox.com.

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7 Questions You to Need to Ask when Choosing a Signage System. Deliver real-time communications, including emergency messaging, to students, faculty, and staff.
Choosing the Right Digital Signage System

Best practices for creating high-value, compelling content that delivers extraordinary results.
Digital Signage Content 101

Why your school or university needs digital signage and how to implement it.
Digital Signage in Education

### Digital Signage and Multimedia (Continued)

Deliver real-time communications—including emergency messaging—to students, teachers, and staff.
Digital Signage for K–12

Everything you need to ask when planning and evaluating digital signage.
The Roadmap to Digital Signage Success

Falling victim to these common mistakes can cost you both time and money.
Seven Pitfalls to Avoid When Planning Digital Signage

### Industrial

Connect industrial equipment to your network by using USB.
Bridging the Gap: USB Converters

Learn about system configuration, cabling selection, transient protection, software, and device selection.
The Elements of an RS-422 and RS-485 System

When is fiber the ideal choice for your network?
Fiber Optic Technology

Understanding Power Needs for Industrial Control Devices
Industrial Power Solutions

Run wireless even in extreme environments.
Industrial Wireless

### Interface and Protocol Converters

Connect industrial equipment to your network by using USB.
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Learn about system configuration, cabling selection, transient protection, software, and device selection.
The Elements of an RS-422 and RS-485 System

Go beyond the five-meter USB distance limitation with USB extenders! Read How to extend USB and break the five-meter barrier.
Extending the Benefits of USB

### KVM

An overview of extension and switching technologies in high-performance KVM environments.
HD Video and Peripheral Matrix Switching and Extension

Get secure local KVM console access and secure remote IP server access.
Security with the ServSwitch Wizard IP

Use this transparent and reliable switching technology to avoid the limitations of traditional emulations.
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## Networking

Eliminate the need to buy and install expensive network equipment by using wireless Ethernet extension.
5 Questions You Need to Ask When Choosing Wireless Ethernet Extenders

Integrate fiber optic cabling to add speed, distance, and cost savings.
Media Converters

Add low-voltage devices and network equipment in industrial environments without running power.
Power over Ethernet in Industrial Applications

Is your network ready?
Tablets in Education

Common network mistakes that cost money, cause downtime, and create frustration.
Top 10 Network Mistakes

Take these ten steps to ensure wireless success: Ten Commandments of Wireless Communications white paper.
Wireless Communications

Run wireless even in extreme environments.
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Wireless Networking: wireless standards, architecture, security and more white paper. A basic overview of standards, installation, and security.
Wireless Networking

## Network Security

The key to protecting data in motion.
Group Encryption

## Physical Security

See why it's just as important as software-based security.
Physical Network Security

## Power

Understand the power needs for industrial control devices.
Industrial Power Solutions

Understanding the risks to your network and how to choose the right solution.
Power Protection

Add low-voltage devices and network equipment in industrial environments without running power.
Power over Ethernet in Industrial Applications

## Testers and Tools

See how industrial-strength Ethernet has come of age.
Ethernet in Harsh Environments

Learn about the top three growth drivers for fiber networks: greater bandwidth needs, increased storage demands, and the transition to higher network speeds.
Improve the Quality of Fiber Installations with Extended Fiber Certification

Meet the need for implementation speed without sacrificing accuracy.
Proven Techniques and Best Practices for Managing Infrastructure Changes

Move your private networks in premises and campus environments towards high-speed applications.
Testing Today's High-Speed Multimode Fiber Infrastructure

Use easy-to-install, standardized, plug-and-play technology.
Troubleshooting Your Industrial Network

Be sure to complete this step when installing a new local area network segment.
Validate LAN Installations for Optimal Service Delivery

## Wireless

Ten Commandments of Wireless Communications white paper. Take these ten steps to ensure wireless success.
Wireless Communications

Run wireless even in extreme environments.
Industrial Wireless

Is your network ready?
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A basic overview of standards, installation, and security.
Wireless Networking